# MONTHLY WEATHER REVIEW.

Editor: Prof. CLEVELAND ABBE.

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## INTRODUCTION.

The REVIEW for June, 1896, is based on 2,690 reports from stations occupied by regular and voluntary observers, classified as follows: 149 from Weather Bureau stations; 33 from U. S. Army post surgeons; 2,363 from voluntary observers; 34 from Canadian stations; 1 from Hawaii; 96 received through the Southern Pacific Railway Company; 14 from U. S. Life-Saving stations. International simultaneous observations are received from a few stations and used together with trustworthy newspaper extracts and special reports.

The WEATHER REVIEW is prepared under the general editorial supervision of Prof. Cleveland Abbe. Unless otherwise specifically noted, the text is written by the Editor, but the statistical tables are furnished by Mr. A. J. Henry, Chief of the Division of Records and Meteorological Data. Special acknowledgment is made of the hearty cooperation of Prof. R. F. Stupart, Director of the Meteorological Service of the Dominion of Canada, Mr. Curtis J. Lyons, Meteorologist to the Government Survey, Honolulu, and of Dr. Mariano Bárcena, Director of the Central Meteorological Observatory of Mexico.

## CLIMATOLOGY OF THE MONTH.

### GENERAL CHARACTERISTICS.

The month was not distinguished by any remarkable storm. The mean pressure was quite uniformly distributed, but the low pressure that stretches northward from the Gulf of California was unusually well marked. The temperature was slightly above the average in the Lake Region and decidedly so in the Plateau Region; a few stations in Texas and adjoining States reported the highest mean pressure on record; the maximum temperatures in these regions were also the highest on record and the maximum for San Diego was 15° above the previous record. The rainfall was large in Florida and along the east Gulf Coast being the largest on record at Tampa and Meridian.

### ATMOSPHERIC PRESSURE.

[In inches and hundredths.]

The distribution of mean atmospheric pressure reduced to sea level, as shown by mercurial barometers, not reduced to standard gravity, and as determined from observations taken daily at 8 a. m. and 8 p. m. (seventy-fifth meridian time), is shown by isobars on Chart IV. That portion of the reduction to standard gravity that depends on latitude is shown by the numbers printed on the right-hand border.

The *mean pressures* during the current month were highest on the immediate coast of Washington and Oregon and were also rather high on the south Atlantic Coast.

The highest were: Fort Canby, 30.11; Tatoosh Island and Eureka, 30.09; Port Angeles and Portland, Oreg., 30.07; Seattle, 30.06; Charleston and Jupiter, 30.05; Savannah, Jacksonsonville, Key West, and Tampa, 30.04. The mean for Bermuda was 30.16. The mean pressures were lowest in Arizona and low in the Gulf of St. Lawrence, Alberta, and Assiniboia. The lowest were: Yuma, 29.72; Phœnix, 29.76, Grindstone, 29.82, El Paso and Medicine Hat, 29.83; Calgary, Miles City, and Fresno, 29.84; Havre, 29.85.

*As compared with the normal* for June, the mean pressure was in excess over the north Pacific Slope, the Missouri and Mississippi valleys, and Lake Region. It was slightly deficient in the remaining regions. The greatest excesses were: Fort Canby, 0.11; Denver, 0.10; Tatoosh Island and Lander, 0.09; Pueblo and Port Angeles, 0.08; Wichita, 0.07. The greatest deficits were: St. Johns, N. F., 0.07; Yuma, 0.06; Fresno and Los Angeles, 0.04.

*As compared with the preceding month* of May, the pressures, reduced to sea level, show a rise over the upper Lake Region, the Mississippi and Missouri valleys and the north Pacific Slope, but a fall over the central and southern Plateau Region, California and the Atlantic States. The greatest rises were: Pierre and Huron, 0.12; Moorhead, St. Paul, Concordia, and Wichita, 0.11; Omaha, Kansas City, and North Platte, 0.10. The greatest falls were: St. Johns, N. F., Sydney, Charlottetown, Sacramento, and Fresno, 0.13; Chatham and Redbluff, 0.12; Halifax, 0.11.

### AREAS OF HIGH AND LOW PRESSURE.

By Prof. H. A. HAZEN.

During the month of June eight storms or depression systems have been sufficiently marked to be traced and charted on Chart I. There have also been seven high areas traced on Chart II. In tracing these highs and lows it has been found extremely difficult at times to distinguish definite highs and lows with an apparent motion in any well defined or certain direction. Often one low will be absorbed by another following in the rear, or else it will fade away entirely. Often the only way in which such a system can be placed upon the map is by a study of the wind directions, since the bendings of the isobars inclose a very large region with no definite high or low. Some of the more important facts regarding the origin and apparent paths and motions of these highs and lows are given in the accompanying table. In presenting